APPLIED SCIENCE.

Compressed air is used to drive certain Paris street cars.

Over 700 patents were issued for the application of electricity to household uses in 1892.

The light efficiency of an incandescent lamp is about 5 per cent, the other 95 per cent being converted into heat.

The insect foes of the farmers are to be experimentally studied in a new department of the Pasteur institute in Paris.

English oculists are intensely interested in the case of a Manchester weaver whose eyes magnify objects to fifty times their natural size.

BOSTON'S CHIEF BELL RINGER.

Plays No End of Tunes on the Old North Church Chimes.

When the chimes of the Old North church, on Salem street ring out "Billy Barlow," "Rock-a-Bye-Baby," or "Massa's in the Cold, Cold Ground" do you know what that means? asks the Boston Herald.

Celebrating a holiday you say.

Well and good, but when the holiday is a close, warm, stuffy one like last Fourth of July, the chiming of the bells means something more.

It means that Charley Jewell is perspiring to beat the band, that he has his coat, hat and vest off, and is all out of breath.

Chiming is hard work. Charley Jewell has been chiming for ten years: his father has chimed for thirty-five, and his grandfather has a record of fifty. They're a family of chimers.

I saw Charley Jewell chime the Old North bells at sunset on the Fourth, and up in that old belfry I wondered if anybody who heard the bells knew or cared how much energy it cost him to give forth that melody.

There are eight bells in the old church, and each of them has a rope attached to it. The ropes come down through two stories, and in the chimers room are fastened to a frame. When the bells are tuned the frame shows eight tight ropes, each the size of a clothes line, and all about the same distance apart. That is the chimer's keyboard.

He pulls the ropes as an archer would pull a big bow, but the chimer has to hustle over the ropes just as a harpist does. That is where the work comes in. It takes force to make the bells sound, and one rope has to be caught almost before the other is dropped.

On a warm day that isn't pleasant.

But chiming is not pealing, and the bells on the Old North are also pealed. It takes six or eight men to peal the bells, and that, too, is warm work. When they are chimed the bells are stationary; when pealed, they swing around and the tongues strike while the mouths are up.

Pealing is English, you know, and the majority of the Old North's pealers are Englishmen. They stand round in a circle; each man has a rope and they pull one after another. They reach high, but the big ropes go through their hands. They catch them again in time, and keep up that program for half an hour.

It's great exercise.

DREW ON THE SULTAN.

Why a Speculator's Draft Was Honored by the Turkish Ruler.

A large operator and speculator of St. Louis, whose account with one friendly bank had often been temporarily overdrawn, wanted $10,000 once for a certain deal, his balance in bank at the time being less than $100, says the San Francisco Argonaut. The cashier suggested that he should draw upon some one not too near to St. Louis. Smith said he did not know whom to draw upon. "Oh, anyone," said the obliging cashier, "as long as the party is far enough away—that will give you time to turn around." Smith drew at sight for $10,000 on the sultan of Turkey. The draft was duly forwarded by the bank, reaching New York, whence it was sent to a London correspondent. It then came into the hands of the Rothchilds, who forwarded it to their Constantinople branch, where it was duly presented for payment to the sultan's chamberlain, the latter bringing it to his highness. "Who is this 'John Smith?'" said the sultan. "Don't know," replied the chamberlain. "Do we owe him anything?" "No," replied the other. "Then I'll not pay it," replied his high mightiness. "One moment, if I might advise," said the astute counselor; "this draft comes through the Rothchilds, with whom we are negotiating a two-million loan. Would it be safe, under the circumstances, to dishonor it?" "Pay it," said the sultan; and it was paid, and no one was more astonished than John Smith of St. Louis, and the quick-witted cashier.

Their Occupation Gone.

A class of men afflicted by the hard times in London and Paris is the army of professional promoters. The hotels where Americans most do congregate are thronged with these men, who in other days have been prosperous and cut a dash socially, politically or in a business way, but who now have a difficulty in making both ends meet. These men, some bravely keeping up appearances, but others reduced to the shabby-genteel stage, eagerly scan the passenger lists of arriving steamers from America and descend upon the acquaintance and associates of former days, anxious to offer their services in return for anything from a loan of £10 to a good square meal.

Mechanical Progress.

In the year 1883, when the first contract was signed for the increase of the United States navy, there was not a single mill in the country that had ever made plates required in the specifications; there was no foundry suitable to turn out the work, no forges for the same, and no plant that could make the armor plates. Since that time there have been brought forward shops and yards that can produce any quantity and of the highest quality, any work in steel, or brass or iron that the new navy demands.—Hardware.

Thinking will keep us from doing wrong.

A whole bushel of notions don't weigh half as much as one little stubborn fact.

AFTER THE BATTLE.

A waste of land, a sodden plain,
A lurid sunset sky,
With clouds that fled and faded fast
In ghostly phantasy;
A field upturned by trampling feet,
A field up piled with slain,
With horse and rider blent in death,
Upon the battle plain.

The dying and the dead lie low;
For them no more shall rise
The evening moon, nor midnight stars,
Nor daylight soft surprise;
They will not wake to tenderest call,
Nor see again each home,
Where waiting hearts will throb and break
When this day's tidings come.

Two soldiers lying as they fell
Upon the reddened clay,
In daytime foes, at night in peace,
Breathing their lives away.
Brave hearts had stirred each manly breast,
Fate only made them foes,
And lying dying side by side,
A softened feeling rose.

"Our time is short," one faint voice said,
"To-day we've done our best
On different sides, what matter now,
To-morrow we're at rest.
Life lies behind. I might not care
For only my own sake,
But far away are other hearts
That this day's work will break.

"Among New Hampshire's snowy hills
There pray for me to-night
A woman and a little girl
With hair like olden light,"
And at the thought arose forth at last
The cry of an anguish wild
That would not longer be repressed,
"O God! My wife! My child!"

"And," said the other dying man,
"Across the Georgia plain
There watch and wait for me loved ones
I'll never see again.
A little girl with dark bright eyes
Each day waits at the door.
The father's step, the father's kiss,
Will never greet her more.

"To-day we sought each other's lives,
Death levels all that now,
For soon before God's mercy seat
Together we shall bow.
Forgive each other while we may,
Life's but a weary game,
And right or wrong, the morning sun
Will find us dead, the same."

The dying lips the pardon breathes,
The dying hands entwine,
The last ray dies and over all
The stars from heaven shine
And the little girl with golden hair,
And one with dark eyes bright,
On Hampshire's hills and Georgia's plain,
Were fatherless that night.

—American Tribune

MY JO, JOHN.

BY HELEN B. MATHERS.

CHAPTER XV—CONTINUED.

"I never deserted your mother," he said, coldly and firmly. "She deserted me. When I had lost my fortune, when I stood most in need of love and sympathy—she left me. And I could not live on a woman—especially when she did not want me."

"But she did not know," cried Tom. "She never knew a word of your losing any money until to-day. She thought that—"

John made a gesture with his hand to command silence.

"I do not know what she thought. I only know what she did. And she had wounded me deeply, Tom, long before that, by her railing, her jealousy, her whole conduct, so utterly unlike anything I had ever known in her before."

"She was jealous, certainly, father," said Tom, coloring, "but—"

"I had given her no occasion" said his father sternly, and indeed the past six months had clearly soured the usually sweet, frank temper. "She might have trusted me, but she did not. She might have seen my trouble, but she would not. I may be blind, but I think I should have known if she had been going through such a mental crisis as I was going through then, and I think that I should have been—kinder.

"She has been broken-hearted, father," said Tom under his breath, but his father caught it.

"No," he said, suddenly and sharply, "the woman who coldly and deliberately proposed a separation, who with perfect sang-froid carried it out, and quietly removed herself, and home and income, from a ruined man, takes too much care of her own comfort to be a broken-hearted woman. I had ruined myself, and in a manner—by reflection—her, and she could not forgive me. She was tired of me. She had other views—"

"Views?" ejaculated Tom, staring at his father by the dim, miserable light. "What do you mean?"

"She spoke of marrying again, regretting that she could not get a divorce, and actually asked me to strike her, that she might do so."

"She was very sorry afterwards, sir."

"I didn't understand it then," said John, whose pale face seemed to have dwindled to a point, while his dull eyes had that peculiarly hollow look belonging to privation and misery; "but I did—after. Why, Tom, that man she was frisking with at Euston that night—I never saw the fellow before in my life—dressed up like a girl, and a fringe, Tom; just think of it, at her age, and with a grown-up son. I saw directly that was why she had talked about getting a divorce, and he called her dear. Oh! shameless!"

He glanced downwards at the open book as if to calm himself with its philosophy, then went on quickly:

"I was anxious about her—women are such weak creatures, and she had always been taken such care of—and if you'll believe me, one night in September I stole down to Pigeonwick, and I stood in her garden like a thief, and looking like a beggar, and I heard them talking—your mother and that fellow—on the veranda. He said what a pity it was she hadn't a man who really loved her, to look after her and pet her, and she said in a hard voice, not like your mother's, that she wished she had, and he said sometimes people (meaning me) died, and then she could be happy. And then I came away, for I had heard quite enough."

"Mamie must have been upstairs," burst out Tom. "Why, dad, don't you know who that fellow was? Mamie's husband, and mother's brother-in-law."

John Anderson's jaw dropped, he stood staring at Tom as at a total stranger.

"Mamie's husband!" he repeated. "Captain Dewar?"

"Of course. You never saw him, you know, as Aunt Mamie was married in India."

John mechanically sat down at the table, but after a moment his face grew stern again. His hurt at Mary's hand was too deep, it had bled inwardly too long, to be lightly healed, but it suddenly struck Tom as extraordinary how little stress his father laid on his ruin, and his subsequent privations, so entirely was he engrossed with Mary and her conduct.

"Dad," blurted out Tom, "how have you lived all these months?"

John passed his hand across his brow, as one who by an effort recalls distasteful things.

"There's no excuse for me, Tom," he said. "I had no business speculating, but I got entangled—entangled. I don't know how it was, but some wonderful big thing in which Lady Blanche and her husband expected to make a fortune, and in which I took shares, went wrong, and I found myself liable for a sum that only the realization of all my property, and even assignment of my half-pay for some years, would meet. Poor woman—she meant well no doubt, and she was kind and sympathetic at first, but afterwards, when I went over to Scotland, she entirely changed, and was very rude to me, so I came away."

"Beast!" said Tom, savagely; "but you haven't told me, father, how you kept body and soul together."

"Do you remember Cousin Tabitha, Tom, the poor little old governess who got past work, and to whom I made an allowance for many years? Well, she came into a small fortune last spring, and wrote and told me. I wrote to her boldly, and asked her to send me £25 a year for a 'distressed relation.' She never guessed it was me, and sends it regularly. If she had failed, or died—" he paused.

A slight sound at the door made them both glance at it, Tom apprehensively. Wider and wider it opened, and something sank down noiselessly across the threshold.

Tom did not stir, only looked at his father, who looked back with a terrible, wild question in his eyes, then John Anderson strode across the room and stooping to that unconscious figure, bore it swiftly back in his long arms.

How light it was, what a mere feather-weight, as he sat down in the crazy chair and looked at the face lying on his breast, deathly pale, with the dews of exhaustion pearling her brow.

She could not say one word for herself, and a true woman, however wronged, never has a word to say for herself, but John read the story that her face told, and his soul yearned over her, and all the past burned up like a scroll, and he felt the richest, happiest man in the whole world to-night.

He smoothed the brown hair back from her face, uncut now, just as it used to be—the fringe, where was it?—and pressed his lips to her cheek, her tender mouth, her throat, calling her his little one, his Mary, never even seeing how Tom had slipped away, and they two were alone together.

Out of the darkness, and pain, and misery, she opened her blue eyes on his face, and reaching out a timid arm, stole it round his neck. She was home now, safe, too happy yet to dare look her joy full in the face, but it was there. O, yes, it was there, and God surely would not be so cruel as to snatch it from her again.

"John," she said, when they had kissed again with tears, "why did you lock the dressing-room door that night when I was coming to ask you to make it up?"

"Were you coming?" said John, in a startled tone.

"Yes, I almost had my hand on the door when you suddenly turned the key."

"I thought you had been asleep for hours," said John, "and that you had shut the door as a sign to me that no appeal would alter your determination to leave me. And I was angry, Mary, as well as deeply hurt, and I thought you were angry too."

Mary hung her head, but happiness dimpled the corners of her lips, and laughed in her eyes.

"You used to say I was getting fat, John—it used to be the only fault you ever found in me, but I am not too fat now?"

John laughed, and made a real lover's speech, and when Mary had twisted his moustachios and kissed the top of his head just where the hair grew thin they looked as happy a pair as you could wish to see.

Then Mary, waking to the fact that the world was not contained in a sharp white face, lit by two kind eyes, looked around the room shuddering.

"My poor boy," she said, and then shuddered again, took in every detail of the famine haunted place, and burst out crying.

"And I have lain warm and soft," she sobbed, "in my little bright nest."

A discreet knock came at the door.

"Come in," said John, and Fletcher, clothed and in his right mind, stood in the aperture, while over his shoulder Martha's rosy, smiling countenance peeped.

"The cab is at the door, sir, and I will follow you with the luggage."

"Fletcher, you scoundrel," said John, "come here. So it was you tracked me out here, was it?" And John wrung his hand, while Martha made a bee-line for her mistress, and the two women wept and smiled together.

"Your hat, sir," said Fletcher, who had in some mysterious way brushed and made it look respectable.

"My books!" said John Anderson, and Mary pinched his arm and laughed.

"I am afraid I have been a little extravagant," he said humbly, "but when it came to be a choice between a dinner and a book——"

"I say," said Tom, putting his head in at the door, "all Slum court is waiting outside to see you off—Slum court never goes to bed, I believe."

Mary beckoned to Tom, with a wistful feeling that he had been forgotten, left out in the cold, and they hugged each other in silent warmth.

"My boy," said John, putting his hand on Tom's shoulder, but Tom knew well enough how it was Mary—Mary, who filled his father's heart to overflowing.

And then in happy procession they all went down the broken, evil-smelling stairs.

A rough crowd surrounded the unwonted apparition of a cab in that quarter, but the words they spoke were not rough when John Anderson appeared with his wife.

"Gor bless him!" cried one hoarse voice; "he give me a meal often when he wanted one hisself."

"He sot up all one night with me, and made gruel hisson," said a woman's feeble voice farther away.

"Never did no yallerin and preachin', but helped everybody," affirmed a man with a face like a bulldog.

"Glad to see you, mum," said a virago, who had apparently forgotten to clothe herself when she stepped out to take the air, "Never a soul deserved a good missus, he do."

"All right, cabby," said Fletcher imperturbably, but John checked him and heartily shook the many hands thrust out to seize his.

"Good-bye. God bless you!" he said.

"Lord bless yer!" came the reply in a hoarse, eager shout.

Be sure that the human heart beats every whit as strong and true in the East of London as in the West; and the benediction and its echoes seemed to follow the three as they drove away, perchance will follow them always, who knows? to the end of their lives.

THE END.

SETTING A ROOSTER.

It Was a Spurred Bird, But It Was Determined to do Housework.

A citizen of Rumford had canvassed the town in vain from end to end in search of "a hen to set," when he heard that an old darkey on the Boston, Providence and Newport road had a great deal of "setting stock." As this was just what he wanted, he lost no time in hunting him up. He found the old man building a hen coop in the rear of his residence. Approaching, he asked, by way of broaching the subject, how many hens he had setting.

"Three hens and a rooster, boss."

"And a which?" inquired the poultry man, thinking he had not heard straight.

"A rooster," replied the darkey.

Seeing the look of distrust on his visitor's face he took him into a low building, and sure enough there sat a huge Brahma rooster calmly covering twenty eggs. On one side of him sat two hens and on the other a third hen. The visitor, seeing how stately the rooster sat, secretly resolved to get some of the darkey's eggs and hatch out a special lot of roosters. On being asked what he did when the rooster wouldn't sit any longer, the darkey replied, "dat ar rooster done bound to set," pointing underneath the box.

Looking under the box the visitor was surprised to find both of the rooster's legs sticking through holes in the box. The black rascal had actually bored holes through the box and tied the rooster's legs underneath, so, as he said, the rooster was "done bound to set."

Inquiring into the matter the Rumford man found that the darkey had four hens and one rooster. Three of the hens were setting and the other was laying. The darkey, finding the eggs of the hen accumulating quite fast, decided to let up on feeding the rooster corn and make him hatch a flock of chickens.

A Little Girl's Find.

"See, mamma, what I've got," gleefully said the 6-year-old daughter of Mrs. Hill, Johnston street, Germantown, lately, as she tossed a bundle of greenbacks, gold and silver coins, and pennies, valued at $400, into her mother's lap. "Where did you get all this?" was asked. "On a lot," said the little girl, innocently. Mrs. Hill made inquiries and found that her daughter had been playing on a lot at Duval and Green streets, and had really found the money lying on the dumping ground. How the money got there is a mystery to the police, but it is generally believed that the money was accidentally dropped in some ashes gathered from a distance and then thrown on the dumping ground.—Philadelphia Press.

The Magic Word.

A company of ladies and gentlemen were loud in their praise of the conduct of a policeman who had stopped a runaway horse.

"That's nothing to boast of," said Champoireau. "I have stopped more than ten cab horses in my time without moving from the spot."

"Really! How did you manage it?"

"Nothing easier. A cab horse bolts, I go and stand on the edge of the pavement and call out: 'By the hour!' when it at once drops into a crawl."

Narrow Ideas.

He—My friend writes that it is so beautiful in the country he feels as if he were in heaven. She—Is his wife with him? He—You have very narrow ideas about heaven, my dear.—Spare Moments

THEN AND NOW.

Grandma Expatiates Upon the Wonders of Modern Household Inventions.

The dear old lady folded up the old fashioned edge she had been knitting, and looked over her glasses as the soft rays of electricity from the drooping lilies of the chandelier flooded the room.

There was no hint of the eighty-three years of her life, only in the white hair, the dainty cap and a few benevolent lines in her sweet old face.

There was a reminiscent look in her placid eyes as she leaned back in her rocking chair and took off her glasses.

"My dears, you are living in a wonderful age," she said. "I can remember when a woman guarded a bit of fire in her chimney as carefully as the modern woman does her jewels.

"To allow the last spark in a household to expire betokened a poor housekeeper and entailed infinite trouble and vexation with flint and tinder, or as a last resort, a trip to the nearest neighbor, often miles away, for a brand of fire or a living coal.

"This invariably subjected the unlucky housewife to criticism.

"The first matches I ever saw were called 'Lucfers,' and my mother took them and placed them carefully away in an old pewter tea-pot and placed it on the top of the tall clock in the living room, so that the dangerous things, as she regarded them, would be well out of the children's reach. I remember with what awe we looked at that tea-pot, and how carefully we avoided the vicinity of the clock.

"They were sorry affairs in comparison to the parlor match with which you are familiar, and to strike one was to be almost suffocated with brimstone.

"Our only lights were 'tallow dips,' and candle making was as regular an institution as house cleaning or training day.

"Wax candles were used for the tall brass candlesticks in the 'best room,' which was only lighted on grand occasions, or for the use of the very rich.

"Now you have only to touch a tiny button in the wall and all the house is brilliantly illuminated, or turn a little wheel in the grate and merry flames leap up the chimney.

"My dears, in those days these wonderful things to which you are so accustomed would have been pronounced witchcraft, pure and simple."

Here the dearly beloved head began to nod drowsily, and some one tiptoed across the room to tuck a fleecy shawl around grandma's shoulders, while sleep and dreams of the long ago glorified the sweet old face.

For Sweet Charity.

The income of merely the principal charitable institutions having their headquarters in London amounts to over £7,000,000 per annum, or $35,000,000. That represents a sum equal to half the whole capital invested in the bank of England. It exceeded the total revenues of all the British colonies together in 1884, and it is as much as the present total annual revenues of all the British colonies, excluding New South Wales, Victoria and Canada. If there is added to this sum the income of the smaller charities the total benevolence paid voluntarily in the metropolis does not fall far short of £10,000,000, or $50,000,000.

The Women to Blame.

Professor Peal, the ethnologist, recently described to the Asiatic society the condition of the head-hunting Nagas on the borders of the Assam. The women are to blame for the continuance of the practice; they taunt the young men who are not tattooed, and the latter go out and cut off heads to exhibit to them, fully half of which are those of women and children. The area occupied by the tribe is not more than twenty miles square, but in it during the past forty years more than twelve thousand murders have been committed for the sake of these ghastly trophies.